

improves patient QoL, incurs lower health-related costs, and offers a better economic utilization of health care resources relative to placebo.

**PCN75**

**COST-EFFECTIVENESS OF THALIDOMIDE COMBINED WITH MELPHALAN AND PREDNISONE IN PREVIOUSLY UNTREATED MULTIPLE MYELOMA IN WALES**

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**OBJECTIVES:** Thalidomide (Thalidomide Pharmion® brand drug) combined with melphalan (M) and prednisone (P; MPT) increases progression-free survival (PFS) and overall survival (OS) compared to MP. We estimated life-time health and cost consequences of MPT versus MP in Welsh patients with untreated multiple myeloma. **METHODS:** A Markov model with 4 health states: PFS with adverse event, PFS without adverse event, progressed, and dead. Transition probabilities and discontinuation were derived from a clinical trial. Within the trial, subjects remained on treatment for up to 12 6-week cycles or until progression or treatment-limiting toxicity. Treatment duration and average dose were modelled to match the trial. Thromboprophylaxis with MPT was included. Utilities associated with adverse events and disease states were obtained from the literature. Disease-management costs reflect clinical practice in Wales. Costs and outcomes were discounted at 3.5% per annum. **RESULTS:** The model estimated 25 months PFS with MPT versus 12 months with MP, with OS of 4.03 for MPT versus 2.88 years with MP; a gain of 0.9 (3.22 vs. 2.32) QALYs. MPT's higher lifetime costs (£16,937 vs. £1,524), lead to an ICER of £17,002 per QALY gained and £13,346 per life-year gained. Probabilistic sensitivity analyses showed that the results remained consistent through changes in model parameters as 95% of model replications produced costs between 12,750 and 26,500 per QALY gained. **CONCLUSIONS:** Replacing MP with MPT is a cost-effective strategy, which can deliver substantial improvements in PFS and OS in a life-limiting orphan disease in Wales.

**PCN76**

**COST-EFFECTIVENESS OF CHEMOPREVENTION WITH DUTASTERIDE BASED ON RESULTS FROM THE REDUCE CLINICAL TRIAL**

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**OBJECTIVES:** The REDUCE trial examined whether chemoprevention with a 5-alpha reductase inhibitor, dutasteride, reduced the rate of prostate cancer (PCa) detection on biopsy. We examine the cost-effectiveness of using dutasteride compared with usual care in preventing PCa in men at increased risk as seen in REDUCE. **METHODS:** A Markov model was developed to compare the costs and outcomes of chemoprevention with dutasteride 0.5 mg/day or usual care in men 50–75 years, with serum prostate-specific antigen (PSA) of 2.5–10 ng/mL (<60 years) or 3.0–10 ng/mL (≥ 60 years), and a single negative, prostate biopsy in prior 6 months. The model simulated the REDUCE cohort of men annually through different health states (e.g. healthy male, PCa, BPH, PCa recurrence) over ten years. Risk of PCa for usual care and dutasteride patients was obtained from REDUCE, where dutasteride showed a reduced risk of 23% and no significant increase in high grade tumors. Additional benefits in terms of reduction in benign prostate hyperplasia (BPH) progression (e.g. surgeries, acute urinary retention) were considered. Impact of adverse events (e.g., incontinence, erectile dysfunction, ejaculatory dysfunction) were considered. Costs and utilities were obtained from the published literature. **RESULTS:** Dutasteride patients experienced fewer PCa's (334 vs. 410 per 1000 patients) and increased costs (\$17,237 vs. \$13,800) compared with usual care patients. Although life years were not significantly impacted, dutasteride patients incurred an increase in quality-adjusted life years (QALYs) of 0.15. Chemoprevention with dutasteride was found to be cost-effective with an incremental cost per QALY of \$22,562. Results were robust to changes in parameters. **CONCLUSIONS:** Despite increased costs, due to taking a daily drug for prevention, the use of dutasteride is cost-effective in men at increased risk for PCa. Use of dutasteride for PCa prevention in the appropriate population could reduce the cost associated with the treatment of PCa and prevent reductions in quality of life associated with PCa treatment.

**PCN77**

**COST-EFFECTIVENESS ANALYSIS OF TEMSIROLIMUS VS. SUNITINIB MALATE IN POOR PROGNOSIS METASTATIC RENAL CELL CARCINOMA (MRCC) IN PORTUGAL**

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**OBJECTIVES:** New therapies have recently been introduced for the treatment of mRCC. The objective of this analysis was to evaluate the cost-effectiveness of two such treatments, temsirolimus (TEM) and sunitinib (SUN) for the management of poor prognosis mRCC patients in Portugal. **METHODS:** A Markov model simulating disease progression in poor prognosis mRCC was developed to estimate cost-utility of TEM vs. SUN over 3-year time horizon. Patients in the model move through progression free survival (PFS), disease progression, or death. Transitions between health states were estimated from Weibull curves fitted to overall survival (OS) and PFS of interferon (INF), the common comparator in TEM and SUN trials. Hazard ratios of treatment effect of TEM and SUN to INF were then applied. PFS and OS were based

on poor prognosis patient population for TEM and SUN. On-treatment utility estimates were based on EQ5D data. Local costs of drug, administration and medical follow-up were used. Analyses were run considering the uncertainty around PFS and OS measures using model generated 95% CI. Probabilistic sensitivity analysis was conducted to evaluate impact of assumptions on input parameters. **RESULTS:** The mean estimated total cost and QALYs for TEM was €18,757 (range €11,646 to €31,141) and 0.584 yrs. (range 0.388 yrs. to 0.794 yrs.). While for SUN the mean estimated total cost and QALYs was €14,323 (range €4,958 to €38,875) and 0.381 yrs. (range 0.125 yrs. to 0.831 yrs.). The mean incremental cost per QALY for TEM vs SUN was €21,783. Within the ranges of uncertainty, 20% of the time TEM could dominate SUN and 76% of the time TEM was more costly and more effective. **CONCLUSIONS:** TEM is projected to be cost effective compared to SUN in management of poor prognosis mRCC patients.

**PCN78**

**COST-EFFECTIVENESS ASSESSMENT OF ZOLEDRONIC ACID (ZOL) RELATIVE TO PLACEBO (PBO) IN THE TREATMENT OF LUNG CANCER PATIENTS WITH SKELETAL METASTASES IN FIVE EUROPEAN COUNTRIES**

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**OBJECTIVES:** ZOL is efficacious vs. PBO in reducing the risk of skeletal-related events (SREs) in lung cancer (LC) patients with bone metastases. Limited information exists on its economic impact. This study assessed the cost-effectiveness of ZOL in the LC setting in France (FR), Germany (DE), UK (UK), Portugal (PT), and the Netherlands (NL). **METHODS:** Comparisons of direct costs and quality-adjusted life years (QALY) between patients on ZOL vs. PBO were assessed using a literature-based model. Clinical information on survival, SRE incidence and infusions administered were obtained from a randomised clinical trial in LC patients, comparing 4 mg ZOL (every 3 weeks for 21 months) to PBO. Drug acquisition and administration costs were obtained from publicly available sources. SRE costs were obtained from Diagnosis-Related Group (DRG) tariffs and published information in FR, UK, and DE and from retrospective medical record reviews in NL and PT. **RESULTS:** The expected average survival for patients on ZOL and placebo was the same (8.5 months [median = 5.89 months]). Per-patient (pp) SRE occurrence was projected to be higher and QALYs lower in PBO group (SREs = 2.07; QALYs = 0.292) vs. ZOL-treated patients (SREs = 1.32; QALYs = 0.352). ZOL drug-related costs ranged from €1510 in DE and €1484 per patient (pp) in UK. The use of ZOL was associated with a reduction in SRE costs ranging from €1.15 pp in FR to €1942 pp in NL. Overall, ZOL saved €319 pp in NL, followed by €291 in DE, €216 in UK, €67 in PT, and €2 in FR. In sensitivity analysis the cost per QALY gained remained under €50,000 in a wide range of scenarios. **CONCLUSIONS:** ZOL leads to fewer SREs and better estimated quality of life. This multinational evaluation reports ZOL to be a highly cost-effective treatment relative to PBO for LC patients with bone metastases.

**PCN79**

**COST-EFFECTIVENESS EVALUATION OF THE USE OF CAPECITABINE+DOCETAXEL VS GEMCITABINE+DOCETAXEL IN PATIENTS WITH RECURRENT BREAST CANCER WHO PREVIOUSLY FAILED TO ANTHRACYCLINE CHEMOTHERAPY AND/OR WITH METASTATIC DISEASE**

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**OBJECTIVES:** To develop a cost-effectiveness evaluation of the use of capecitabine+docetaxel vs gemcitabine+docetaxel in patients with recurrent breast cancer who previously failed to anthracycline chemotherapy and/or with metastatic disease. **METHODS:** A Markov model was built in order to show the clinic course of a cohort of patients with recurrent breast cancer who previously failed to anthracycline chemotherapy and/or with metastatic disease in order to set a quantitative comparison between the costs associated in the schemes at the institutional Mexican context. The model includes three health states (no progression, progression and death), within a 12 months horizon. The outcomes obtained as effectiveness measure is Progression-Free Survival (PFS); in order to define resources and procedures to set costs a literature search for economic evaluation and different disease management alternatives was done; the costs used to run the model included diagnosis, treatment, following and medical support. The threshold to define a therapy as cost-effective was fixed at US\$25,020.00 (least than three times Mexican GDP per capita) following the recommendations of WHO's Commission on Macroeconomics and Health. **RESULTS:** The total management cost at 12 months with capecitabine+docetaxel is US\$23,117.90 vs US\$23,978.12 for gemcitabine+docetaxel. The Cost-effectiveness plane indicates capecitabine+docetaxel is a cost-effective therapy; with a probability of 0.50 of being cost saving and 0.80 to be cost-effective is at a US\$25,020.00 threshold. **CONCLUSIONS:** Results show that capecitabine+docetaxel is a cost effective therapy when comparing with gemcitabine+docetaxel therapy in first line therapy for patients with breast cancer who previously failed to anthracycline chemotherapy and/or with metastatic disease.